

**AMENDMENTS TO THE CLAIMS**

A marked-up version of the claims that will be pending following entry of the present amendments showing the amendments made herein follows. Matter that has been deleted from the claims is indicated by strikethrough and matter that has been added is indicated by underlining.

1. (Previously presented) A Multi-Analyte Profile (MAP) Test Panel comprising 20 or more subsets of microspheres, the microspheres of one subset being distinguishable from those of another subset by their characteristic fluorescence signatures and harboring at least one reagent designed to interact selectively, if not specifically, with a predetermined analyte.
2. (Original) The MAP Test Panel of claim 1 which comprises 50 or more, 75 or more, 100 or more, 200 or more, or 300 or more subsets of microspheres.
3. (Previously presented) The MAP Test Panel of claim 1 in which the microspheres of one subset are distinguishable from those of another subset by characteristic fluorescence signatures derived from at least three incorporated fluorescent dyes.
4. (Previously presented) The MAP Test Panel of claim 3 in which the microspheres of one subset are distinguishable from those of another subset by

characteristic fluorescence signatures derived from at least four incorporated fluorescent dyes.

5. (Original) The MAP Test Panel of claim 1 in which the at least one reagent comprises a small molecule, natural product, synthetic polymer, peptide, polypeptide, polysaccharide, lipid, nucleic acid, or combinations thereof.

6. (Original) The MAP Test Panel of claim 1 in which the predetermined analyte comprises a drug, hormone, antigen, antibody, protein, enzyme, DNA, RNA, or combinations thereof.

7. (Currently amended) A kit for assaying 20 or more predetermined analytes in a single pass through a flow analyzer comprising a Multi-Analyte Profile (MAP) Test Panel comprising 20 or more subsets of microspheres, the microspheres of one subset being distinguishable from those of another subset by their characteristic fluorescence signatures and harboring at least one reagent designed to interact selectively, if not specifically, with a predetermined analyte, and further comprising associated buffers, vials, supplemental reagents, or any combination thereof.

8-38. Cancelled.

39. (Withdrawn) A method of using a Multi-Analyte Profile (MAP) Test Panel to assess a subject's health or medical condition comprising:

- (a) exposing the one or more test samples obtained from a subject to a Multi-Analyte Profile (MAP) Test Panel comprising 20 or more subsets of microspheres, the microspheres of one subset being distinguishable from those of another subset by their characteristic fluorescence signatures and harboring at least one reagent designed to interact selectively, if not specifically, with a predetermined analyte, which interaction generates biochemical data concerning the predetermined analyte;
- (b) gathering the biochemical data, if any, generated from the exposure;
- (c) comparing the biochemical data generated from the one or more samples obtained from the subject with accumulated biochemical data generated from test samples taken periodically from at least about 1,000 individuals over a given time interval, which accumulated biochemical data provide a relationship between one or more predetermined analytes and the health or medical condition of a plurality of individuals whose accumulated biochemical data share similar features; and
- (d) assessing the health or medical condition of the subject based, at least in part, on the results of the comparison.